

AMENDMENTS TO THE CLAIMS

This claim listing is to replace all previous versions. In accordance with the PTO's revised amendment format, changes are shown by strikethrough and double brackets for deletions, or underlining for additions.

Claim Listing

Claims 1-8 (Cancelled).

9. (currently amended): A method comprising:

receiving an input string containing at least first and second languages ~~that are represented without using different text forms;~~

segmenting the input string into probable typing candidates having different partitions, one to another;

generating one or more candidate strings of language text for each said language using one or more said probable typing candidates; and

determining at least one said candidate string ~~in the first language~~ that may be used to replace the input string based on a probability of how likely the ~~first~~ at least one said candidate string was incorrectly entered as the input string ~~in the first language.~~

10. (original): A method as recited in claim 9, further comprising selectively performing one of (1) converting the input string to the candidate string in the first language, or (2) leaving the input string in the second language.

11. (original): A method as recited in claim 9, wherein the first language is a primary language and the second language is secondary language used less frequently than the primary language.

12. (original): A method as recited in claim 9, wherein the input string of the first language comprises phonetic text and the input string of the second language comprises non-phonetic text.

13. (original): A method as recited in claim 9, wherein the first language is Chinese and the second language is English.

14. (currently amended): A method comprising:
receiving an input string containing at least first and second languages;
segmenting the input string into probable typing candidates having different partitions, one to another;

determining at least one first candidate string using at least one said probable typing candidate that may be used to replace the input string based on a first probability of how likely the first candidate string was incorrectly entered as the input string in the first language;

determining at least one second candidate string using one or more said probable typing candidates that may be used to replace the input string based on a second probability of how likely the second candidate string was incorrectly entered as the input string in the second language;

using the first candidate string if the first probability is higher than the second probability to derive at least one output string containing the first language;
and

using the second candidate string if the first probability is lower than the second probability to derive at least one output string containing the second language.

15. (original): A method as recited in claim 14, wherein the first language is a primary language and the second language is secondary language used less frequently than the primary language.

16. (original): A method as recited in claim 14, wherein the input string of the first language comprises phonetic text and the input string of the second language comprises non-phonetic text.

17. (original): A method as recited in claim 14, wherein the first language is Chinese and the second language is English.

18. (original): A method as recited in claim 14, wherein the input string is a combination of Chinese Pinyin and English, and the output string is a combination of Chinese Hanzi and English.

19. (original): A method as recited in claim 14, further comprising obtaining the first and second candidate strings from a database.

20. (previously presented): A method as recited in claim 14, further comprising:

deriving the first probability that the first candidate string was incorrectly entered from data collected from multiple users entering a training text in the first language; and

deriving the second probability that the second candidate string was incorrectly entered from data collected from multiple users entering a training text in the second language.

21. (original): A method as recited in claim 14, further comprising displaying the output string in line with the input string being entered by a user.

22. (original): One or more computer-readable media having computer-executable instructions that, when executed on a processor, direct a computer to perform the method as recited in claim 14.

23. (currently amended): A method comprising:

allowing entry of an input string containing at least first and second languages without switching modes for entry of the first and second languages;

segmenting the input string into probable typing candidates having different partitions, one to another; and

determining probable candidate strings, from the probable typing candidates, in at least one of the first and second languages that may be used to replace the input string based on probabilities of how likely each of the candidate strings was incorrectly entered as the input string;

selectively performing, based on the probabilities, one of (1) converting the input string to an output string in the first language and outputting the output string, or (2) outputting the input string in the second language.

24. (original): A method as recited in claim 23, further comprising:
displaying the input string containing the first and second language in a single edit line; and
selectively displaying the output string or the input string in the single edit line.

25. (original): A method as recited in claim 23, wherein the first language is Chinese and the second language is some language other than Chinese.

Claims 26-30 (Cancelled).

31. (Currently amended): A language input architecture comprising:
a typing model to receive an input string, segment the input string into probably typing candidates having different partitions and determine a typing error probability of how likely at least one candidate string was incorrectly entered as the input string, the typing model being trained in a language; and
a language model to provide output strings for each said typing candidate, the language model being trained in another language.

32. (original): A language input architecture as recited in claim 31, wherein the first language is a primary language and the second language is secondary language used less frequently than the primary language.

33. (Currently amended): A language input architecture comprising:
a first typing model to receive an input string, segment the input string into probably typing candidates having different partitions and determine a first typing error probability of how likely a first candidate string was incorrectly entered as the input string;

a second typing model to receive the input string, segment the input string into probably typing candidates having different partitions and determine a second typing error probability of how likely a second candidate string was incorrectly entered as the input string; and

a search engine to select one of the first and second candidate strings based on the respective first and second typing error probabilities.

34. (original): A language input architecture as recited in claim 33, wherein the first typing model is trained using a first language and the second typing model is trained using a second language.

35. (original): A language input architecture as recited in claim 33, wherein the input string contains phonetic text and non-phonetic text and the first typing model is trained to the phonetic text and the second typing model is trained to the non-phonetic text.

36. (original): A language input architecture as recited in claim 33, wherein the first typing model is trained using Chinese and the second typing model is trained using English.

37. (original): A language input architecture as recited in claim 33, wherein the input string contains Pinyin and English and the first typing model is trained to the Pinyin and the second typing model is trained to the English.

38. (original): A language input architecture as recited in claim 33, further comprising a language model to provide an output string for the selected typing candidate.

39. (original): A language input architecture as recited in claim 38, wherein the search engine converts the input string to the output string.

40. (original): A language input architecture as recited in claim 38, further comprising a user interface to receive the input string and to display the output string in a common edit line.

41. (original): A word processor embodied on a computer-readable medium comprising the language input architecture as recited in claim 33.

42. (currently amended): A language input architecture comprising:
a user interface to receive an input string written in a combination of phonetic text and non-phonetic text;

a first typing model to produce probable first typing candidates written in the phonetic text that may be substituted for the input string based on typing error probabilities of how likely each of the first candidate strings was incorrectly entered as the input string, wherein each said first candidate string is produced at least in part by segmenting the input string;

a second typing model to produce probable second typing candidates written in the non-phonetic text that may be substituted for the input string based on typing error probabilities of how likely each of the second candidate strings was incorrectly entered as the input string, wherein each said second candidate string is produced at least in part by segmenting the input string;

a language model to provide possible conversion strings written in language text for the first typing candidates written in the phonetic text; and

a search engine configured to selectively (1) convert the input string to one of the conversion strings so that the phonetic text is replaced with the language text, or (2) output one of the second candidates so that the non-phonetic text is maintained without conversion.

43. (original): A language input architecture comprising as recited in claim 42, wherein the search engine converts the input string to one of the conversion strings when the first probability is higher than the second probability.

44. (previously presented): A language input architecture comprising as recited in claim 42, wherein the search engine outputs one of the second candidates based on a comparison of the typing error probabilities of the second candidate strings with the typing error probabilities of the first candidate strings.

45. (original): A language input architecture comprising as recited in claim 42, wherein the phonetic text is a first language and the non-phonetic text is a second language.

46. (original): A language input architecture comprising as recited in claim 42, wherein the phonetic text is Pinyin and the non-phonetic text is English.

47. (cancelled).

48. (cancelled).

49. (currently amended): One or more computer-readable media having computer-executable instructions that, when executed on a processor, direct a computer to:

allow entry of an input string containing at least first and second languages without switching modes for entry of the first and second languages;

determine probable candidate strings in at least one of the first and second languages that may be used to replace the input string based on probabilities of how likely each of the candidate strings was incorrectly entered as the input string,

wherein the probable candidate strings are generated from probable typing candidates formed by segmenting the input string;

selectively perform, based on the probabilities, one of (1) converting the input string to an output string in the first language and outputting the output string, or (2) outputting the input string in the second language.

50. (Currently amended): One or more computer-readable media having computer-executable instructions that, when executed on a processor, direct a computer to:

receive an input string containing phonetic text and non-phonetic text;

segment the input string into probable typing candidates having different partitions, one to another;

generate one or more candidate strings using one or more said probable typing candidates;

determine at least one first said candidate string written in the phonetic text that may be used to replace the input string based on a first probability of how likely the first said candidate string was incorrectly entered as the input string;

determine at least one second said candidate string written in the non-phonetic text that may be used to replace the input string based on a second probability of how likely the second said candidate string was incorrectly entered as the input string in the second language;

associate possible conversion strings written in language text for the first typing candidates written in the phonetic text;

convert the input string to the conversion string associated with the first said candidate string when comparison of the first probability with the second

probability indicates it is more likely that the first said candidate string was incorrectly entered as the input string so that the phonetic text is converted to the language text; and

output the second said candidate string when comparison of the first probability with the second probability indicates it is more likely that the second said candidate string was incorrectly entered as the input string in the second language so that the non-phonetic text remains unconverted.